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ABSTRACT

The hypotheses of the current study attempt to expand and refine what is currently known about the relationship between family types and actual behavioral adjustment as reported by older adolescents. High school seniors (N=2250 in 14 high schools in the middle South region) indicated their level of personal participation in a variety of problem and conventional behaviors and their perceptions of their families via the FACES II. Based on their scores (using the current linear scoring of the adaptability and cohesion subscales), students were assigned to one of four family types, representing the environment (by their own perceptions) in which they were reared: balanced, moderately balanced, mid-range, or extreme. Significant MANOVA results for family type were found within the combined gender sample and for females separately--but not for males--when gender (used with the combined-gender sample), SES, and family structure were statistically controlled. When adaptability and cohesion dimensions were considered separately, cohesion was a powerful predictor of behavioral adjustment, especially for females, but adaptability was unrelated to behavioral adjustment in any of the groups (combined gender, males only, females only). These results call into question the continued use of the adaptability dimension as measured by FACES II. (Contains 36 references.) (EMK)

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**Family Adaptability and Cohesion:
Relationship to Older Adolescent Behaviors**

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Abstract

Through self-report surveys, administered to 2250 graduating seniors in 14 high schools in the middle South region, students indicated their level of personal participation in a variety of problem behaviors and conventional behaviors. They also rated their perceptions of their families on two family-type dimensions, adaptability and cohesion, via the FACES II. Based on their scores from the adaptability and cohesion subscales, students were assigned to one of four family types, representing the environment (by their own perceptions) in which they were reared: balanced, moderately balanced, mid-range, or extreme. Significant MANOVA results for family type were found within the combined-gender sample and for females separately, but not for males, when gender (used with the combined-gender sample), SES, and family structure were statistically controlled. When adaptability and cohesion were considered separately, cohesion was a powerful predictor of behavioral adjustment, especially for females, but adaptability was unrelated to behavioral adjustment in any of the groups (combined-gender, males-only, and females-only).

Family Adaptability and Cohesion: Relationship to Older Adolescent Behaviors

Olson and colleagues devised the Circumplex Model of family functioning (Olson, Sprenkle, & Russell, 1979) based on family systems theory and, specifically, on the belief that moderate levels (rather than high or low levels) of adaptability and cohesion among family members foster optimal family functioning in a curvilinear fashion. In an attempt to measure this model, the dimensions of adaptability and cohesion were incorporated into the Family Adaptability and Cohesion Evaluation Scale (FACES; Olson et al., 1979) and its revisions (FACES II, Olson, Portner, & Bell, 1982; FACES III, Olson, Portner, & Lavee, 1985). Adaptability is defined as the extent to which the family system is flexible and able to change its power structure, role relationships, and relationship rules in response to situational and developmental stress. Cohesion is defined as the extent to which family members are separated from or connected to the family, or the degree of emotional bonding that family members have toward one another (Olson et al., 1992). The bulk of early FACES research involved the discriminate power of the Circumplex Model to distinguish between families with some affliction and those without (Carnes, 1987; Garbarino, Sebes, & Schellenbach, 1984; Rodick, Henggeler, & Hanson, 1986). In these studies, the investigators considered whether a larger percentage of subjects from clinical families fell within the dysfunctional family types (e.g., "extreme") and whether a greater proportion of non-clinical participants fell within the more functional family types (e.g., "balanced").

After nearly two decades of debate over the linearity versus curvilinearity of the FACES, some scholars believe that while the theory behind the curvilinear Circumplex Model itself may be valid (moderate levels of adaptability and cohesion are best for functional families), the scales created to measure this model are inadequate in doing so (Cluff, Hicks, & Madsen, 1994; Green, Harris, Forte, & Robinson, 1991; Olson et al., 1992; Pratt & Hansen, 1987). Rather, strong evidence has accumulated for the hypothesis that the adaptability and cohesion scales represent concepts that are linearly related to the adjustment of family members (Barnes & Olson, 1985; Cluff et al., 1994; Cohen, 1994; Daley, Sowers-Hoag, & Thyer, 1991; Farrell & Barnes, 1993; Geber & Resnick, 1988; Green et al., 1991; Hampson, Hulgus, & Beavers, 1991; Olson et al., 1992). Although the cohesion dimension consistently and strongly relates to the conceptual and empirical idea of support in a family (Barnes & Farrell, 1992; Farrell & Barnes, 1993; Hampson et al., 1991), studies have not so clearly discerned the construct of or the utility of the adaptability dimension. Even Olson himself indicated that cohesion (at least as measured by FACES III) was a more powerful predictor of family functioning than was adaptability, and that cohesion (rather than adaptability) accounted for most of the variance between FACES and dependent variables (Olson, 1991).

Currently, Olson and colleagues (1992) are recommending the use of FACES II over the more recent FACES III for research studies due to its higher alpha reliability and concurrent validity. Conceding to the overwhelming linear evidence, linear scoring norms and interpretation have been provided and changes in terminology have been made. For example, the prior "chaotic" category is now interpreted as "very flexible" and is acknowledged as the healthiest adaptability category. The

prior "enmeshed" category is now interpreted as "very connected" and is considered the most functional cohesion category for families. These changes clearly encompass linear thinking in regard to the adaptability and cohesion dimensions.

Numerous early studies were involved with establishing the discriminant validity of FACES II through nonparametric methods. These used the previous scoring method of placing families into one of 16 categories determined by the curvilinear hypothesis. While a few studies have employed bivariate techniques to compare balanced and midrange families with extreme families using the early scoring methods (Smart, Chibucos, & Didier, 1990), there is a dearth of multivariate studies using the currently-recommended linear scoring technique with FACES II.

The hypotheses of the current study attempt to expand and refine what we currently know (or do not know) about the relationship between family types, as determined by the FACES II instrument, and actual behavioral adjustment as reported by older adolescents. First, it is hypothesized that there will be a significant linear relationship among all four of the family types designated by the new FACES II scoring norms which mathematically combine the adaptability and cohesion scores. These family types will be related to both problem behaviors and conventional behaviors in this combined-gender adolescent sample, as well as in male and female samples separately. Second, based on the studies reported above, it is expected that when taken separately, cohesion will have a strong relationship to the dependent variables while adaptability will not, in the combined-gender, all-male, and all-female samples. If it is found that the adaptability scale serves no useful purpose, then its continued use would appear unwarranted.

Method

This sample consisted of 2250 graduating public high school seniors (age range: 16-20 years; mean age = 17.69 years; 52% female) from 14 high schools in 8 counties in a middle South region during late spring of their senior year. All participants provided information regarding their age, gender, ethnicity, socioeconomic status (SES), and family structure (intact 59.3%, step-parent 16.1%). The sample was predominantly Caucasian (non-Hispanic White; 89.3%) with 6.9% African American participants.

High schools were contacted and invited to participate in this study. In return for their participation, school administrators were provided with the results of the study for their own school, reported in group format. Approximately 27% of the high school seniors either were absent on the day of the survey, chose not to participate in the survey, or did not return the parental consent form (if under age 18 years) and therefore, did not participate in the study. Nevertheless, this 73% participation rate is quite good and is similar to that found in other recent studies (Smetana, 1995). Students were administered the surveys as a group in their regular English classes. All students were able to complete the survey in one sitting of 50 minutes.

The *Family Adaptability and Cohesion Evaluation Scale* (FACES II; Olson et al., 1982) was used to determine family type. The FACES II, a 30-item self-report questionnaire, measured the two dimensions of family behavior, cohesion and adaptability. The students rated each item on a five-

option Likert-like scale based on how much the item applied to their families or to "the family with whom you have the most contact" in the case of divorced and remarried parents. Total score for the 14-item adaptability subscale placed the respondent's family into one of eight sub-levels which correspond to four levels based on the Olson et al. (1992) norms and cutting points for adaptability. Likewise, total score for the 16-item cohesion subscale placed the respondent's family into one of eight sub-levels which correspond to four levels for cohesion. Necessarily, family type (FACES II score) is also considered linear and is now found by determining the mean of the adaptability and cohesion sub-levels (1-8) which correspond to four levels for family type (1-4 from least functional to most functional): extreme, mid-range, moderately balanced, and balanced. With the currently recommended linear scoring of this scale, Olson and colleagues found that higher levels of adaptability and cohesion within a family predicted greater functionality of that family (Olson, 1993).

As a type of reliability check, students were queried regarding their degree of honesty in responding to all the questionnaire items. In this high school senior sample, 95.3% of all students surveyed indicated that they had been mostly (9.4%) or totally (85.9%) honest in their responses.

The two major dependent variables were *unconventional / problem behavior* and *conventional behavior*. Since prior studies of family type predominantly have used just one target behavior at a time, an attempt was made to include many variables representing a wide variety of problem and conventional behaviors and those most typically mentioned in the adolescent literature.

The *unconventional or problem behavior scale* ($\alpha = .86$) was comprised of eight standardized subscales with varying numbers of items per subscale, each item containing five response options ranging from "never" to "6 or more times." The range for all scales was 0 to 4. Unless otherwise noted, the students were asked about their involvement "during the past year" in these problem behaviors. Self-report of problem behavior has been used by many researchers (e.g., Hirschi, 1969; Jessor & Jessor, 1977; Kline, Canter, & Robin, 1987) and has been shown to be reasonably reliable and valid (Oetting & Beauvais, 1990; Patterson & Stouthamer-Loeber, 1984), perhaps even more so than police records which suffer from under-reporting (McCord, 1990). The *conventional behavior scale* ($\alpha = .73$) was composed of two subscales. The response format was the same as above for the problem behaviors.

Results

The four-way $4 \times 2 \times 3 \times 3$ (family type \times gender \times SES \times family structure) MANOVA for the overall model indicated significant main effects for family type and all demographic variables in the combined-gender sample: MANOVA family type, $F(30, 6056) = 2.71$, $p < .0001$, Wilks' lambda = .962; gender, $F(10, 2063) = 8.39$, $p < .0001$, Wilks' lambda = .961; SES, $F(20, 4126) = 6.16$, $p < .0001$, Wilks' lambda = .943; family structure, $F(20, 4126) = 2.61$, $p < .0001$, Wilks' lambda = .975 with no significant interpretable interaction effects. The accompanying univariate analyses of variance (ANOVAS) associated with the significant family type MANOVA indicated highly significant differences among the means of the four family types on 8 of the 10 dependent variables, even when statistically adjusted for gender, SES, and family structure (see Table 1). In every case, the students who rated their families as

mid-range or extreme participated in significantly more problem behavior and in significantly less conventional behavior than did those students who rated their families as balanced or moderately balanced.

The MANOVA for males alone ($n = 1012$) indicated non-significant main effects for family type, $F(30, 2842) = 1.45$, $p < .06$, Wilks' lambda = .957 and for family structure, $F(20, 1936) = 1.00$, $p > .40$, Wilks' lambda = .980, but did reach significance for SES, $F(20, 1936) = 2.71$, $p < .0001$, Wilks' lambda = .946. There were no significant interaction effects, so family type cannot be considered a *moderator* in this male-only model. The MANOVA for females alone ($n = 1130$) demonstrated highly significant main effects for family type, $F(30, 3188) = 2.39$, $p < .0001$, Wilks' lambda = .937; SES, $F(20, 2172) = 5.07$, $p < .0001$, Wilks' lambda = .913; and family structure, $F(20, 2172) = 3.06$, $p < .0001$, Wilks' lambda = .946. Since there were no interaction effects present, it appears that family type did not *moderate* the effects of either SES or family structure, but that family type had a consistent effect across the various levels of SES and family structure in this all-female model. As expected in hypothesis one, these family types were related to both problem behaviors and conventional behaviors in the combined-gender sample, as well as in the female-only sample; however, in the male-only sample the differences among the means of the various family types were not significant.

To investigate the relationship between behavioral adjustment and adaptability and cohesion separately, adaptability and cohesion were divided into four levels each as per the Olson et al. norms (1992). A MANOVA testing the model was performed in order to control for the shared variance among the measures. The MANOVA for this overall model indicated significant main effects for cohesion, $F(30, 6021) = 2.18$, $p < .0002$, Wilks' lambda = .969; gender, $F(10, 2051) = 4.49$, $p < .0001$, Wilks' lambda = .979; and SES, $F(20, 4102) = 4.60$, $p < .0001$, Wilks' lambda = .957, with no significant explainable interaction effects for the genders combined. There was not a significant main effect, however, for adaptability, $F(30, 6021) = 0.64$, $p > .90$, Wilks' lambda = .991 (see Table 2). When MANOVAS were completed for each gender separately, similar results were found in that neither MANOVA demonstrated significant main effects for adaptability, males: $F(30, 2657) = 0.96$, $p > .50$ and females: $F(30, 2962) = 0.91$, $p > .60$. However, main effects for cohesion from the MANOVAS for each gender separately were: males, $F(30, 2657) = 1.56$, $p < .03$ and females, $F(30, 2962) = 2.30$, $p < .0001$ (see Table 2).

Considering hypothesis two, when the scales were introduced separately, there were significant main effects for cohesion in the combined-gender, all-male, and all-female samples, and overall, cohesion appeared to exert a greater effect on behavioral adjustment for females than it did for males. In this graduating high school senior sample, there were no significant differences in behavioral adjustment among any of the four levels of adaptability in any of the three MANOVAS for any of the dependent variables (with the exception of drinking problems in males). Therefore, it can be said that adaptability made little contribution to this model.

Conclusions

The present study determined that family type is significantly related to behavioral adjustment in older adolescents even after adjusting for gender, SES, and family structure. As expected, older adolescents approaching high school graduation, who rate their families as balanced and moderately balanced experience the most favorable behavioral adjustment. These adolescents participate in significantly less problem behavior and significantly more conventional behavior than do adolescents in families perceived as mid-range or extreme when measured by the current linear scoring of the FACES II. Family type shows a stronger relationship to behavioral adjustment for adolescent females than for adolescent males. This is consistent with prior studies that have found family influence variables to be more important for female adolescents than for males (Hein & Lewko, 1994; Romig & Bakken, 1992).

Not only were adaptability and cohesion considered simultaneously (family type) in this study, but also, the influence of each dimension on behavioral adjustment was considered separately. While cohesion was strongly related to behavioral adjustment in female adolescents, it proved surprisingly weak in its relationship to behavioral adjustment in the male adolescent sample. These results concur with those of Romig and Bakken (1992) who found that cohesion was related to expressed and desired levels of intimacy in adolescent females, but had little influence on adolescent males, and with Barnes and Farrell (1992) who found that support (cohesion) had a stronger effect on deviance for females than for males. In addition, Jackson, Dunham, and Kidwell (1990) noted in their study of gender, identity, and cohesion, that females perceived more cohesion in their families than did males. Even more revealing, however, was the finding that the adaptability scale was unrelated to behavioral adjustment, not only in the combined sample, but also in both the male and the female samples. This suggests that the adaptability scale may not be a valid measure. These results concur with those found by other investigators in regard to the lack of utility of the adaptability scale (Daley et al., 1991; Green et al., 1991; Kennedy, 1985; Masselam, Marcus, & Stunkard, 1990; Olson, 1991; Romig & Bakken, 1992). Since adaptability made little contribution to the model, it calls into question the continued use of the adaptability dimension as measured by FACES II.

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Table 2. Summary of Univariate ANOVAS from the MANOVA Test with All Dependent Variables on Family Type for the Combined-Gender Sample

Variable	Family type				F	df (69, 2072)	Pairwise comparisons $p < .05$	Effect size f
	Balanced 4 ($n = 125$)	Moderately balanced 3 ($n = 588$)	Mid-range 2 ($n = 777$)	Extreme 1 ($n = 652$)				
School misbehavior	1.09 (.88)	1.38 (.93)	1.70 (1.04)	1.78 (1.03)	9.09***		1, 2 > 3 > 4.	.31
Alcohol use	.73 (1.01)	1.11 (1.08)	1.44 (1.15)	1.43 (1.20)	3.59*		1, 2 > 3 > 4.	.29
Drinking problems	.16 (.29)	.29 (.41)	.45 (.56)	.48 (.60)	7.54***		1, 2 > 3, 4.	.27
Drug use	.32 (.68)	.46 (.79)	.72 (.94)	.81 (.99)	9.81***		1, 2 > 3, 4.	.24
Deceit/theft	.14 (.31)	.28 (.49)	.48 (.70)	.54 (.72)	9.82***		1, 2 > 3, 4.	.28
Sex risk	.96 (.99)	1.00 (.98)	1.25 (1.01)	1.31 (.97)	2.36		1, 2 > 3, 4.	.17
Aggression	.09 (.29)	.23 (.50)	.36 (.65)	.42 (.65)	4.49**		1, 2 > 3, 4.	.25
Delinquency	.09 (.26)	.23 (.45)	.34 (.58)	.44 (.64)	9.57***		1 > 2 > 3, 4.	.26
Academic Aspirations	2.71 (.64)	2.55 (.66)	2.30 (.75)	2.23 (.73)	8.14***		1, 2 < 3, 4.	.32
Religiosity	2.48 (1.27)	2.30 (1.17)	1.92 (1.13)	1.81 (1.11)	6.94***		1, 2 < 3, 4.	.26

Note. ($N = 2142$). Students with missing responses were eliminated from the MANOVA. Principal entries are means; standard deviations appear in parentheses below each mean. MANOVA is statistically adjusted for gender, SES, and family structure.

*** $p < 0.001$. ** $p < .005$. * $p < .05$.

Table 2. Summary of Univariate ANOVAS from the MANOVA Tests with All Dependent Variables on Cohesion and Adaptability for Males, Females, and Genders Combined

Variables	Gender					
	Males (n = 1012)		Females (n = 1130)		Genders combined (N = 2141)	
	MANOVA F df(30,2657)	Univariate F df(97,914)	MANOVA F df(30,2962)	Univariate F df(111,1018)	MANOVA F df(30,6021)	Univariate F df(81,2060)
COHESION	1.56*	(WL=.950)	2.30***	(WL=.935)	2.18**	(WL=.969)
School misbehavior		1.78		2.12		2.42
Alcohol use		2.50		3.53*		5.51**
Drinking problems		1.18		2.37		2.93*
Drug use		0.23		3.41*		3.23*
Deceit/theft		0.77		6.59**		4.81**
Sex risk		0.59		1.01		1.40
Aggression		0.66		11.11***		4.27*
Delinquency		1.30		0.84		0.95
Academic aspirations		0.37		2.98*		2.91*
Religiosity		6.48**		3.32*		10.02***
ADAPTABILITY	0.96	(WL=.969)	0.91	(WL=.974)	0.64	(WL=.991)
School misbehavior		0.87		0.96		0.34
Alcohol use		0.52		0.40		0.82
Drinking problems		3.06*		2.38		0.44
Drug use		1.05		0.60		0.44
Deceit/theft		0.82		0.02		0.15
Sex risk		0.37		0.04		0.27
Aggression		1.60		0.97		0.73
Delinquency		1.79		1.08		0.27
Academic aspirations		1.33		0.44		0.29
Religiosity		1.69		0.84		1.75
GENDER					4.49***	(WL=.979)
SES	2.37**	(WL=.950)	3.06***	(WL=.942)	4.60***	(WL=.957)
FAMILY STRUCTURE	0.78	(WL=.983)	1.99*	(WL=.962)		

Note. WL = Wilks' lambda. SES = socioeconomic status.

***p < .0001. **p < .005. *p < .05.

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